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TECHNICAL REPORT
Tobacco Cessation Program Comparison
Health Promotion and Prevention Initiatives (HPPI) Program

Abstract
Tobacco use negatively impacts force readiness and the ability to accomplish the mission. The short-term impacts of tobacco use on readiness include increased numbers of sick call visits, increased incidence of cold weather and training injuries, decreased night vision, decreased hand-eye coordination, and reduced stamina. Since tobacco use is both a readiness and a health issue, it is important to provide Soldiers with effective tobacco cessation interventions. The purpose of this HPPI project was to compare the implementation of three standardized tobacco cessation programs at a single US Army installation in order to identify critical program components.

A comparison was made of program lengths, targeted quit date, number of program sessions offered beyond the quit date, program location, session content, use of pharmacotherapy, follow-up quit rate data, and participant satisfaction. The most important finding from this comparison was the identification of group support and pharmacotherapy (nicotine replacement therapy and bupropion SR) as critical elements for participant success.

Project detail

Background: Several different tobacco cessation programs are used at Army installations to assist Soldiers in stopping their use of tobacco products. Some installations use the US Army Center for Health Promotion and Preventive Medicine (USACHPPM) Tobacco Cessation Program, which was developed through the Health Promotion and Prevention Initiatives (HPPI) Program. Other installations either purchase tobacco cessation program materials from nonprofit or commercial organizations, or create their own programs from a mixture of materials. Since tobacco cessation is an important issue both for Soldier readiness and for Soldier health, the goal of this program comparison was to determine what critical components of these programs are most effective for tobacco cessation.

Impact on Soldier readiness: Tobacco use in the Army is high-profile issue and has a direct impact upon the Soldier's ability to accomplish the mission. In addition to the well-known long-term health hazards of tobacco use, there are now clearly identified short-term impacts of tobacco use on readiness. Using tobacco decreases night vision, impacts the ability to deal with stress, and decreases mental acuity. Other effects of tobacco use include reduced lung capacity, reduced fine motor coordination, slower wound healing, and greatly decreased stamina. In addition, tobacco use is a major cause of heart disease, stroke, and diseases of the blood vessels. Tobacco use also causes cancer of the lung, oral cavity, pharynx, larynx, esophagus, pancreas,

kidney, bladder and cervix. Tobacco cessation benefits the command as a whole because tobacco-free Soldiers are stronger, healthier, and better able to perform their mission. Tobacco cessation also benefits each Soldier by giving them an opportunity to maintain a healthier lifestyle and decrease the health risks associated with tobacco use.

Methods: Three different tobacco cessation programs were offered sequentially throughout the year: the USACHPPM Tobacco Cessation Program, the American Cancer Society (ACS) Fresh Start Program†, and the American Lung Association (ALA) Freedom from Smoking Program†. The USACHPPM program was offered at the unit level only. The ACS Fresh Start Program was conducted at both the unit level and at the Medical Treatment Facility (MTF). The ALA Freedom From Smoking Program was held only at the MTF.

There were many similarities between the three programs. All programs were conducted in a group setting during weekly sessions. All programs used Nicotine Replacement Therapy (NRT). All programs encouraged participants to "buddy" with another class member for individual support. In addition, all three programs contained similar content, including:

- Assessing readiness to quit tobacco
- Understanding nicotine addiction
- Setting a quit date
- Understanding triggers and altering patterns of living
- Stress management
- Handling withdrawal
- Avoiding weight gain
- Relapse prevention

The three programs had similar enrollment and assessment protocols. Participants could enroll in any of the programs through consults from their primary care manager as well as via self-referral. During the first session, the program facilitator discussed program objectives and participants completed a health assessment, including nicotine use history. The remaining sessions included education, an established quit tobacco date, and a graduation session.

During a separate appointment, a physician used the health assessment to prescribe appropriate nicotine replacement therapy (NRT) and bupropion SR. During this medical appointment, participants were screened for elevated blood pressure. Participants were also instructed regarding the proper use of NRT medications and their potential side effects. Blood pressure was monitored at regular intervals throughout NRT use.

The primary differences between programs were the number of sessions and timing of the quit day. In addition, the programs were offered to different populations: the USACHPPM program

†*Use of specific tobacco cessation program names does not imply endorsement by the US Army but is intended only to assist in identification of the specific tobacco cessation program.*

was attended only by Active Duty Soldiers; the other two programs were attended by a mix of Active Duty Soldiers, adult dependents, and retirees.

Table 1 summarizes program differences and similarities:

Table 1: Tobacco cessation program components

Program name	Program length	Program uses bupropion SR?	Program uses Nicotine Replacement Therapy?	Quit Day	# of Sessions after Quit Day
USACHPPM (Unit only)	6 sessions	Yes	Yes	Session 3	3
ACS Fresh Start (Unit and MTF)	5 sessions	Yes	Yes	Session 4	1
ALA Freedom from Smoking (MTF only)	8 sessions	Yes	Yes	Session 4	4*

**The ALA Freedom from Smoking program offered the longest program, with expanded information pertaining to behavioral modifications covered for 4 weeks past the quit day.*

During this year-long project, the USACHPPM program was offered twice, the ALA Freedom From Smoking Class was offered twice, and the ACS Fresh Start Program was offered three times.

Critical success factors: One critical factor for participant success across the three programs was group support. This is consistent with the VHA/DOD Clinical Practice Guideline (CPG) for the Management of Tobacco Use (http://www.oqp.med.va.gov/cpg/TUC3/TUC_Base.htm). According to this CPG, effective treatment for tobacco cessation should include either individual or group support. A second critical success factor identified in this comparison was the use of pharmacotherapy (nicotine replacement therapy and bupropion SR). This is also consistent with the CPG, which recommends that every tobacco user be offered nicotine replacement therapy and bupropion SR except when medically contraindicated.

Innovative project aspects: This project sought to determine factors critical for participant success among several different tobacco cessation programs. The project also demonstrated an innovative relationship with the units. Each unit was assigned a health promotion tech who taught requested health promotion classes at the unit level. This personalized attention helped establish a good working relationship with command and cadre. The health promotion tech also facilitated class schedule modifications to meet the needs of the unit. An additional benefit of this relationship with unit leadership was increased visibility of tobacco cessation.

Project implementation: HPPI FY05 project

Post program data collection: Program graduates were contacted by phone or mail at two weeks, three months, and six months past program completion. The health promotion coordinator gathered information about the graduates' tobacco status at each interval and offered assistance if the graduates had relapsed.

Data limitations: This parallel implementation of multiple tobacco cessation programs was

done for evaluation purposes only, and not as a clinical trial. As such, participants were not randomly assigned to a program nor were there any comparison or control groups. In addition, data sets are small. Because multiple variables such as program setting and population were so different between the three programs, quit rates should not be used as a comparison benchmark.

Program outcomes: Table 2 summarizes program registration, attendance, and graduation totals for the three programs.

Table 2: Tobacco cessation program registration, attendance, and graduation

Program name	Total registered for program	Total attending first session	Graduated tobacco-free
USACHPPM Program (unit program)	46	37	25
ACS Fresh Start (unit program)	?	15	15
ACS Fresh start (program at MTF)	?	32	24
ALA Freedom from Smoking (MTF only)	53	25	10

Confounding variables between these three programs and inconsistencies in data collection make side-by-side comparison of outcomes data impossible. However, an examination of the data that was collected for this project provides four key guidelines for collecting tobacco cessation program outcomes.

Guideline 1: Collect the same data points.
Consistent collection of the same set of outcome measures is essential. This data can be used to quantify program successes, allocate resources more efficiently, and gain command support. This data can also be used to identify program trends over time and enable comparisons between different iterations of the program.

Guideline 2: Determine a data collection schedule.
Identify specific follow-up data collection times. For this initiative, graduates were contacted at two weeks, three months, and six months; other successful Army tobacco cessation programs collect follow-up data at one month, three months, six months, and one year. The crucial time for tobacco cessation relapse is within the first three months; the first follow-up call should occur at no later than one month so that recent graduates get extra support during this critical time.

Guideline 3: Keep the data organized.
Make data organization easy: use a simple tool like a spreadsheet. Find a method that works and then stick with that system.

Guideline 4: Use a reminder system for follow-up.
Plan ahead to remember to follow-up with program graduates: include follow-up on the program schedule; write follow-up dates on a wall calendar; or set a reminder in an electronic calendar. Also plan ahead with program participants and obtain phone numbers and email addresses at the first class.

Loss to follow-up is a significant issue for Army populations. Participants move, get deployed, or simply don't return telephone calls or respond to regular or electronic mail. The difficulty of obtaining follow-up information is illustrated by the data in Table 3.

Table 3: Follow-up data summary – tobacco-free (Quit), known relapses (R), and loss to follow-up (Lost)

	Graduation	2 weeks			3 months			6 months		
Program name	**Quit**	**Quit**	**R**	***Lost***	**Quit**	**R**	***Lost***	**Quit**	**R**	***Lost***
USACHPPM Program (unit)	25	25	0	*0*	5	10	*10*	?	10	*15*
ACS Fresh Start (unit)	15	13	?	*2*	10	?	*5*	*7*	?	*8*
ACS Fresh Start (MTF)	24	15	2	*7*	10	3	*11*	1	4	*19*
ALA Freedom from Smoking (MTF)	10	10	0	*0*	3	?	*7*	3	?	*7*

It is unknown what factors impacted the data collection detailed in Table 3. However, since loss to follow-up will occur when tracking project outcomes over time, a strategy should be developed in advance to meet this inevitable challenge. This strategy should include getting multiple contact methods for each class participant (such as AKO email address, personal email address, and phone numbers) and also informing participants when they will be contacted after the program ends.

Participant feedback: Participants completed satisfaction surveys at the end of each program. Reponses were similar across the three programs, as participants reported that they gained the most from group support and pharmacotherapy. The main criteria that seemed to impact which program participants enrolled in was how class times fit into their schedule.

Table 4: Results from participant survey question – What program component was most beneficial?

	% of graduates completing the survey	Group setting	Pharmacotherapy	Being paired with a buddy
USACHPPM (Unit only)	94%	56%	76%	32%
ACS Fresh Start (Unit and MTF)	45%	92%	85%	23%
ALA Freedom from Smoking (MTF only)	90%	78%	55%	33%

Recommendations:
This initiative demonstrated the importance of flexibility in the planning and implementation of

a tobacco cessation program. In addition, the total number of sessions, timing of classes, and number of sessions after the quit date all appeared to impact which program participants enrolled in. Providing longer and shorter programs throughout the year may help meet the needs of more tobacco users seeking to become tobacco-free.

A standard of comparison for tobacco cessation programs, that includes other measures besides quit rate as a performance benchmark, should be developed. This standard would facilitate the comparison of similar programs.

Questions for further study

1. Does group support have to be face-to-face or would an online support group work equally as well?

2. Do the same critical success factors identified in this initiative (support and pharmacotherapy) apply to Soldiers down range or Soldiers returning from theater?

3. What is the optimal time of day to offer Soldiers tobacco cessation classes in order to minimize program drop-outs? (i.e., would tobacco cessation classes held during Physical Training once a week have lower drop-out rates?)

4. Are current tobacco cessation programs equally effective for smokeless tobacco users?

5. Would it be feasible or practical to tailor Army tobacco cessation programs to population characteristics such as level of tobacco use, rank/grade, or other demographic characteristics? programs this way to Army populations? *(Other tobacco cessation program comparisons have been able to identify effective tobacco cessation delivery methods (i.e., telephone quit lines, websites, MTF programs, unit level programs) based on demographics, tobacco use level, and quit history of program participants.)*

6. How could Army tobacco cessation programs be modified to address Soldier-specific relapse issues (like weight gain and deployment)?

7. What stress management tools and coping skills are most effective for Soldiers in maintaining tobacco-free status and also in preventing tobacco initiation?